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XVIII  
A CONTRIBUTION TO OUR KNOWLEDGE OF THE  
NORTH AMERICAN CONOPIDÆ (DIPTERA)

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In presenting the following tables and descriptions of species I wish to express my doubts as to the validity of several of the older species and to suggest the possibility that one or more of the new forms may later prove to be synonymous with previously described species.

In many cases there seem to be very few characters in the males by which they can be separated with any certainty. The genital plate on the venter of the abdomen of the female, which faces the large apical genital segment, seems to present reliable characters by which to separate the females. These characters have been used largely in the tables of *Oncomyia* and *Zodion*. The proportionate length of the antennal joints is also used in many cases. In the genus *Zodion* the markings of the thorax, the color of the pollen on the thorax and abdomen and the color of the front have been used, although as yet we cannot be sure of the limits of variation of these in the same species. The tables of *Conops* and *Physocephala* are based largely upon color characters. The former follows Kröber's table of North American species, but is changed so as to include the new forms and, in some cases, to correct what seems to be a misunderstanding of a described

June 11, 1927

species. The table of *Zodion* is based on that of Mr. Nathan Banks but there are many changes to include species not in his table, mostly forms described here.

Most of the species described as new are in the collection of the California Academy of Sciences, which it was my privilege to study during the winter of 1925-26.

In the list of species the name of the person placing a name as a synonym is included in parentheses. Where the form "(Aldrich Cat.)" is used the reader should refer to that work for the authority for the synonym.

### 1. *Conops foxi* Van Duzee, new species

Female: Length 7 mm. occiput, thorax, abdomen, coxæ, femora, apical half of tibiæ and all tarsi black; face yellow, facial grooves tinged with black; cheeks with a black spot, sometimes wanting; facial and posterior orbits with a narrow line of silvery, yellowish white pollen, which widens on upper part of face, extends narrowly on lower half of front, and does not reach the vertex on the posterior orbits; proboscis black, one and a half times as long as the head; antennæ black, its joints as 1-2.5-1.5; a narrow line on side of the humeri, a triangular spot on sternopleuræ, sides and upper edge of metanotum, anterior surface of fore coxæ and outer surface of fore and middle tibiæ covered with silvery yellowish white pollen. Abdomen with tip of second and base of third segment yellow; narrow apical margins of third, fourth and fifth segments and posterior surface of sixth covered with yellowish white pollen. Bases and tips of femora, basal half of tibiæ, halteres and pulvilli yellow; claws reddish, tips black. The brown wing stripe extends from the costa to third vein and darkens the two basal cells and the base of first posterior cell; a brown cloud in front of fifth vein fills more than half of discal cell as far as the anterior cross-vein; the posterior part of wing dark grayish, the brown shading into it.

*Type:* Female, No. 2397, Mus. Calif. Acad. Sci., taken by C. L. Fox, July 11, 1925, at Pullman, Washington. Two paratypes were taken at the same time as the type, and one paratype was taken at Metaline Falls, Washington, August 1, 1925, by Mr. Fox.

### 2. *Conops argentifacies* Van Duzee, new species

Female: Length 10 mm. Face, front and cheeks yellow, without spots or lines, except a slight blackish spot around ocelli and at base of antennæ, vertex reddish yellow, somewhat shining; facial grooves, a wide border on facial orbits, extending narrowly up the frontal orbits and

along the cheeks and forming a rather wide border on posterior orbits, but not reaching the vertex, silvery white pollinose. Antennæ black, first joint red, the joints about as 1.5-3-2, style short, black, abruptly narrowed into a spine-like tip, which is shorter than the thick part, the projection at base oval, not as long as width of style; proboscis black, one and a fourth times as long as the head.

Thorax, abdomen, coxæ and femora reddish; three confluent stripes on mesonotum, a spot on sternopleuræ, one above hind coxa, a spot in front of halteres and posterior surface of metanotum, black; mesonotum with white pollen; a small spot on inner side of humeri a spot on each side of metanotum and extending around the black of posterior surface, a faint stripe from middle coxæ to root of wing, front of fore coxæ and outer surface of fore and middle tibiæ, silvery white pollinose. All hairs of thorax, abdomen and legs black; first abdominal segment blackish at base; third segment yellow on basal third, black above on apical two thirds, except a narrow hind border; fourth widely, fifth narrowly blackened at base above; ventral plate on fifth segment large and black; narrow apical margin of third segment, apical half of fourth, all but base of fifth and whole of sixth segment, white pollinose. Tibiæ yellow on basal half, fore and middle ones darkened at tip, especially below; posterior ones with apical third black; tarsi wholly black; pulvilli and claws yellow, tips of claws black; halteres pale yellow.

Wings tinged with yellowish gray; the brown stripe fills the space between the first and third veins; there is a slight brown stripe in first posterior cell at base, along the spurious vein and in front of fifth and sixth veins; the petiole of first posterior and anal cells are of equal length.

A female, taken three days earlier at the same place, differs from that described only in having the petiole of first posterior cell shorter than that of anal cell, in having the pulvilli brown, second antennal joint reddish below, pollen of abdomen golden yellow and the ventral plate on fifth segment reddish. Am calling this Variety A.

*Type:* No. 2398, Mus. Calif. Acad. Sci., taken by C. L. Fox, July 18, 1925, at Lewiston, Idaho.

### 3. *Conops fraterculus* Van Duzee, new species

Male and female: Length 8.5-9 mm. Face, front and cheeks yellow, vertex and occiput more reddish yellow, shining; a wide stripe on facial orbits, extending narrowly up the frontal orbits and rather narrowly up the posterior orbits, but not reaching the vertex, silvery white pollinose; first and second antennal joints reddish, tip of second and third joint

black, antennal joints as 1-2.5-1.6; style short, blackish, tapering into a short yellowish bristle, projection at base small, rounded; proboscis black, one and a fourth times as long as the head.

Thorax reddish yellow; three confluent stripes on dorsum, a spot on sternopleuræ, a small spot above hind coxæ, a mark in front of halteres and posterior surface of metanotum, except upper edge, black; dorsum of thorax with white pollen; a small spot back of humeri, a spot in front of the base of the halteres, a margin surrounding the black of the metanotum and the sternopleuræ, silvery white pollinose. Abdomen reddish; a spot on first segment, a large spot on posterior half of third segment which is divided by a reddish line, a spot on dorsum of fourth and a narrow mark on fifth, black; base of third segment yellow; narrow hind margins on third and fourth segments, apical half of fifth and whole of sixth covered with whitish pollen; ventral plate of female reddish; coxæ, femora and tibiæ yellow; tips of fore and middle tibiæ blackened on one side, hind tibiæ with apical fourth black; pulvilli and claws yellow, tips of claws black; all hairs and bristles on body and legs black.

Wings grayish; the usual brown stripe extends from first vein to third; a narrow brown streak in front of the spurious, fifth and sixth veins; petiole of first posterior cell a little shorter than that of anal cell; male with the dorsum of fourth and fifth abdominal segments largely black; third with a large black spot above. The ventral plate of female long, reddish, with a large, black, reticulated surface on posterior side at tip. One female has the pollen of the head and abdomen more golden yellow.

*Type:* Female, No. 2399, Mus. Calif. Acad. Sci., taken by C. L. Fox, July 17, 1925, at Lewiston, Idaho; *Allotype*, male, No. 2400, Mus. Calif. Acad. Sci., taken by J. G. Grundel, in Stanislaus Co., California, in August; and one paratype was taken at Lewiston, Idaho, July 21, 1925.

#### 4. *Conops rubicundulus* Van Duzee, new species

Female: Length 10-13 mm. Face, front, cheeks and most of tibiæ yellow; pollen on facial grooves silvery white, that on the orbits and tibiæ pale golden yellow; antennæ black, lower part of first joint yellow and lower edge of second reddish, joints of antennæ as 1.3-3.5-2; style short, tapering to a bristle-like point, projection at base small, rounded at tip; proboscis black, a little longer than the head. Thorax, abdomen, coxæ, femora and anterior surface of middle tibiæ at tip, reddish; three confluent stripes on mesonotum, a spot on sternopleuræ, a spot above hind coxæ, a curved line in front of halteres, posterior surface of metanotum, except upper edge, a large spot on posterior surface of fore and middle tibiæ, apical third of hind tibiæ, all tarsi and base of first abdominal segment, black (in one specimen there are two black spots on the dorsum of third segment); dorsum of thorax white pollinose; a spot inside of

humeri, the sternopleuræ, a spot in front of halteres a border around the black of the metanotum, outer surface of all coxæ and the first abdominal segment, silvery white pollinose; narrow apical margin of third abdominal segment, apical half of fourth, fifth except a narrow base and whole of sixth segment covered with pale golden yellow pollen; ventral plate reddish, of moderate size; pulvilli and claws yellow, tips of claws black; halteres pale yellow.

Wings grayish; the brown stripe extends from the first vein to third vein, it is produced forward more or less beyond the tip of the auxiliary vein and backward into the base of first posterior cell, leaving the cell in front of anterior cross-vein clear; a brown cloud in front of fifth vein and one in front of sixth vein, which shades the basal half of last posterior cell a little. Described from three females.

*Type:* Female, No. 2401, Mus. Calif. Acad. Sci., taken by C. L. Fox, July 16, 1925, at Lewiston, Idaho. Two paratypes were taken at the same location on July 15-17, 1925.

TABLE OF THE NORTH AMERICAN SPECIES OF CONOPS

1. Front wholly black or brown.....	2
— Front wholly or partly yellow or yellowish brown.....	11
2. Face wholly black; brown of wing reaching as far as third longitudinal vein; sixth and seventh veins clouded, (Mexico). .....male of <i>formosus</i> Kröber	
— Face wholly or partly yellow, sometimes more yellowish brown.	3
3. Large species, 18-25 mm.; deep black with blackish brown wing stripe.....	<i>magnus</i> Williston
— Smaller species.....	4
4. Wings tinged with gray, with a quadrate brown spot; third antennal joint as long as first and second taken together, (Mexico).....	<i>parvus</i> Williston
— Wings without such a spot, having the usual brown stripe.....	5
5. Wing stripe not very sharply defined.....	6
— Wing stripe sharply limited.....	7
6. Wings almost wholly tinged with black; front metallic black; third antennal joint shorter than second, (North America) (following Kröber).....	<i>brachyrhynchus</i> Macquart
— Wing stripe reaching third vein and covering the two basal cells and base of first posterior cell; a brown cloud in front of fifth vein fills more than half of discal cell as far as anterior cross-vein; posterior part of wing dark grayish, the brown shading into it; antennal joints as 2-5-3, (Washington).....	<i>foxi</i> Van Duzee
7. Wings with a hyaline cross-band reaching from the costa to the cross-veins, tip of wing clouded.....	8
— Wings with the usual brown stripe unbroken.....	9

8. Abdominal segments with pale posterior margins; wing stripe not reaching beyond fourth vein, except a narrow streak along fifth vein; second and third antennal joints of about equal length, (Eastern).....*syllvovos* Williston
- Abdominal segments without pale bands; wing stripe reaching fifth vein; third antennal joint one and a half times as long as second, (Arizona).....*arizonicus* Banks
9. Wing stripe reaching third vein, behind which the wing is subhyaline, except a streak in front of fifth vein, (Mexico)....  
.....*discalis* Williston
- Wing stripe reaching beyond third vein..... 10
10. Third antennal joint about equal to second in length, (Eastern)  
.....*bulbivostriis* Loew
- Third antennal joint two-thirds as long as second, (Mexico)  
.....*mexicanus* Kröber
11. Front with a blackish cross-band and a median, vertical line which forks at the base of the antennæ..... 12
- Front without a distinct, forked median line, sometimes more or less uniformly infuscated..... 15
12. Wing stripe in great part reddish yellow, (West Indies; Carolina).....*pictus* Fabricius
- Wing stripe brown or blackish, not reddish..... 13
13. Wing stripe reaching fourth vein, (Mexico).....*soror* Kröber
- Wing stripe not reaching beyond third vein..... 14
14. Front with the median black stripe narrow and linear; female with front rather narrow, its pollen uniformly distributed, (Georgia; Texas).....*striatifrons* Kröber
- Front with the median black stripe wide; front of female wide, its pollen in transverse lines, (Mexico).....*pictifrons* Kröber
15. Facial grooves with a brown spot or line..... 16
- Facial grooves wholly yellow..... 17
16. Wings almost wholly tinged with brown, only the second basal cell hyaline, (Southern States).....*fencstratus* Kröber
- Posterior part of wing, including a large part of discal and first posterior cells subhyaline; a streak in first basal and anal cells pure hyaline, (Eastern States; Texas).....  
.....*xanthopareus* Williston
17. Second and third antennal joints of nearly equal length..... 18
- Second antennal joint distinctly longer than third..... 20
18. Brown wing stripe nearly filling the space between fourth and fifth veins, (Mexico).....*excisus* Wiedemann
- Discal cell, except for a streak in front of fifth vein, nearly hyaline ..... 19
19. The vertical pollinose pleural stripe distinct, (Mexico).....  
.....*pallifrons* Coquillett
- Pleural stripe indistinct, (Arizona).....*gracilis* Williston
20. Third antennal joint scarcely longer than first, second twice as long as first, (South Carolina)..... *pulchellus* Kröber

- Third antennal joint considerably longer than first..... 21
21. Front with a conspicuous polished space; first antennal joint two fifths as long as second, (Kansas).....*fronto* Williston
- Front without a polished space, except sometimes a small spot around the ocelli..... 22
22. First antennal joint half as long as second, the joints being as 1.5-3-2, (Idaho).....*argentifacies* Van Duzee
- First antennal joint only about one-third as long as second..... 23
23. Ventral plate of female long with a large black reticulated space on posterior surface; first posterior cell clear, except for a streak along the spurious vein, (Idaho).....*fraterculus* Van Duzee
- Ventral plate of female not very long, of moderate size; first posterior cell brown at base; discal cell brown beyond the anterior cross-vein, (Idaho).....*rubicundulus* Van Duzee

*Conops brachyrhynchus* variety *semifuscus* Banks, would probably run to *discalis* Williston in the above table of species, but no doubt it is distinct. As Mr. Banks compares it with *brachyrhynchus* only and as I have never seen that species and have no very good description of it, I could not place it in the table.

##### 5. *Physocephala brevirostris* Van Duzee, new species

Female: Length 8 mm.; of wing 6.5 mm. Face and lower half of front yellow; cheeks, occiput and vertex, upper half of front and a vertical line in the center of the front, connecting with a spot at root of antennæ, red; center of the face silvery pollinose; orbits without a pollinose line; antennæ red, basal joint more yellow, its joints as 6-17-18, style deep black, moderately long, straight above, tapering to a point from lower side, projection at base small; proboscis short, not much longer than the head, almost black, tip black.

Thorax and abdomen dark red; a wide median stripe on the mesonotum, extending over the front and reaching half way to the scutellum, a small spot in front of humeri, a spot at base of halteres and two spots, narrowly separated and rounded above, on posterior surface of metanotum, dull black; fore coxæ and spots between the coxæ shining black; posterior end of abdomen yellowish; no pollen is visible on the thorax and abdomen. Posterior coxæ, femora, tibiæ and tarsi red, fifth joint of all tarsi, pulvilli and claws dark brown; knobs of halteres yellow, stem brown.

Wings blackish from the costa to fifth vein, extending slightly into anal cell at base of wing; apical part of discal cell beyond the anterior cross-vein, except a broad brown stripe along fifth vein, a very narrow

space in front of part of last section of fourth vein, and the posterior margin of the wing grayish; second posterior cell all gray, except a small space back of the petiole at tip of first posterior cell; last section of fourth vein one and a half times as long as the preceding section; petiole of first posterior cell longer than last section of fifth vein.

*Type:* Female, No. 2402, Mus. Calif. Acad. Sci., taken by Dr. E. C. Van Dyke, June 20, 1924, at **Meadow Valley, Plumas Co., California**, at 6,000 feet elevation.

#### 6. *Physocephala humeralis* Van Duzee, new species

Female: Length 15 mm.; of wing 9 mm. Face, front, a large spot on cheeks, halteres and broad base of all tibiae, yellow; proboscis red, black at base and tip; vertex yellowish; occiput, a narrow transverse line below vertex, a median frontal line, forked at base of antennae, lower part of cheeks and a broad band at upper part of cheeks connected along the oral margin with lower part, red; a very narrow line of glistening yellowish pollen on lower half of facial orbits and extending up more widely on the posterior orbits, reaching the upper corner of the eye. Antennae and style red, projection at base of style black and large; antennal joints about as 14-40-18, (in one male the second joint is only 35, not 40).

Thorax and abdomen red; three narrowly separated stripes on the mesonotum, the middle one extending over the front and only reaching the middle posteriorly, a spot in front of the humeri, most of coxae, spot at base of halteres and posterior surface of metanotum, narrowly divided by a red line into two parts, black; more or less black on dorsum of third abdominal segment and usually on fourth and fifth segments. A rather indistinct triangular spot on sternopleurae and a short line above, silvery white pollinose; large spots on the humeri and sometimes a small spot inside, basal and apical margins of second segment of abdomen, narrow posterior border of third, apical half of fourth and fifth and most of sixth segment covered with golden yellow pollen. Femora and apical half of tibiae red, tarsi more yellow with last joints brown; pulvilli brownish; claws red with black tips. On the dorsum of the abdomen the fifth segment is about half as long as fourth; ventral projection on fifth segment large, reddish, black on margin.

Wings with the costal cell yellowish; brown stripe reaching from first to fifth vein, apical part of discal cell from the length of the posterior cross-vein in front of anterior cross-vein except narrowly along the fifth vein, grayish; a spot on first posterior cell and posterior part of wing also grayish; the outer part of marginal cell brownish gray; last section of fourth vein one-fourth longer than the preceding section. Described from three females.



*Type:* Female, No. 2403, Mus. Calif. Acad. Sci., taken by C. L. Fox, July 16, 1925, at **Lewiston, Idaho**. Paratypes taken at the same place and about the same time.

Two of the specimens have the pollinatum of *Aesclepius* attached to the fore tarsi, the black base of the pollinatum is clasped around the bristle-like empodium with the two large yellow parts which carry the pollen extending out beyond, looking like large black and yellow empodii.

7. *Physocephala humeralis simulans* Van Duzee,  
new subspecies

Male and female: Differs from the female described above in being 10-11 mm. long; wing 6.5-7 mm. long; the antennal joints are as 1-3-2; the mesonotum has three confluent or narrowly separated stripes; in the female the fifth abdominal segment is from one-third to one-half as long as fourth segment on the dorsum; in the male the fourth and fifth segments are of nearly equal length on the dorsum. Described from three females and seven males.

*Type:* Female, No. 2404, Mus. Calif. Acad. Sci., taken by E. P. Van Duzee, April 7, 1923, at **Potholes, Imperial Co., California**; *allotype*, male, No. 2405, Mus. Calif. Acad. Sci., taken by C. L. Fox, at Lewiston, Idaho, July 18; paratypes were taken as follows, by J. A. Kusche, July 6, 1921, in Shasta Co., Calif.; by E. P. Van Duzee, June 27, 1922, at Salt Lake City, Utah; by C. L. Fox, July 12, 1925, at Wawawai, Washington, and July 16, 1921, at Lewiston, Idaho.

8. *Physocephala aurifacies* Van Duzee, new species

Male: Length 9 mm.; of wing 6 mm. Face, front and cheeks wholly yellow with the orbits narrowly yellowish silvery; occiput yellowish brown, the lower part more brown as far as the lower corner of the eye. Antennæ yellow, becoming red at base of third joint; its joints as 6-17-8; style red, short, tapering to a point, projection at base rather large, black; proboscis red, black at tip, a little longer than the height of the head.

Thorax red with three, narrowly separated, black stripes, the middle one extending over the front of the thorax, all abbreviated posteriorly; spots in front of the humeri, between the coxæ, at base of halteres and the posterior surface of the metanotum black; spots of white pollen on and behind the humeri, back of suture, inside of humeri extended faintly between the black dorsal stripes, on the sternopleuræ and a large one in

front of halteres. Abdomen red, a little blackened on the sides of third segment and on the dorsum of fourth and fifth segments; posterior margin of third segment, almost the whole of fourth and entire fifth and sixth segments covered with bright yellowish pollen, venter without a projection.

Wings with posterior half and the costal cell almost hyaline; auxiliary vein yellow, the others brown; the usual brown stripe extends from first to fifth veins, but leaves the apical part of discal cell from a point before the anterior cross-vein equal to the length of the posterior cross-vein, except a narrow line in front of fifth vein, the first posterior cell from just before the posterior cross-vein, except extreme tip, and apical part of marginal cell from a little before the tip of second vein, except the tip of the cell and a narrow line in front of third vein, nearly hyaline; last section of fourth vein only a little longer than the preceding section. Described from one male.

*Type:* Male, No. 2406, Mus. Calif. Acad. Sci., taken by E. P. Van Duzee, August 20, 1919, at **Stockton, California.**

#### 9. *Physocephala buccalis* Van Duzee, new species

Male: Length 7-9 mm.; of wing 5-7 mm. Face and front yellow, vertex yellowish red; occiput varying from yellowish red to brown; a transverse stripe on upper part of front, widest in the middle and reaching the eye margin, and a median line, forked at base of antennæ, dark red or brownish; a transverse red band on upper part of cheeks not quite reaching the eye, but narrowly connecting with the red of the occiput along the oral margin; proboscis more than twice as long as the head, red, its tip and base black, upper edge darkened. Antennæ red, third joint more brownish and about half as long as second, first one-third as long as second; style short, abruptly pointed at tip, the upper edge nearly straight, the projection on the side rather large.

Thorax red, dorsum with three, narrowly separated, black stripes, the middle one extending over the front of the thorax and abbreviated posteriorly, lateral ones shortened anteriorly and posteriorly. A spot below the humeri, one at base of halteres, the sternopleuræ and posterior surface of metanotum black; usually there is a notch on the upper edge of the black on metanotum; humeri yellowish with yellow pollen on upper surface; metanotum with traces of white pollen on the sides. Abdomen black with more or less black on the dorsum of third and fourth segments; apical border of third segment, more or less of fourth and whole of fifth and sixth segments, covered with yellow pollen; ventral projection small, reddish.

Femora and apical half of tibiæ red, basal half of tibiæ and tarsi yellow, apical joints of tarsi brown; pulvilli and claws brown.

Wings grayish; costal cell yellowish; the usual brown stripe extends from the first vein to fifth; apical part of discal cell from before the

anterior cross-vein, except narrowly along fifth vein, an elongated spot in front of last section of fourth vein and one in apical part of marginal cell from just before the tip of first vein, grayish, sometimes these spots are not very distinct, the brown shading over them, but leaving them much lighter than the rest of the stripe; last section of fourth vein a little longer than the preceding section. Described from three males.

*Type:* Male, No. 2407, Mus. Calif. Acad. Sci., taken by E. P. Van Duzee, June 27, 1922, at **Great Salt Lake, Utah**. One paratype was taken at Pleyto, Monterey Co., California, May 22, 1920, the other paratype at Pullman, Washington, July 11, 1925, by C. L. Fox.

This comes near *affinis* Williston, but in that species the first antennal joint is half and third joint more than half as long as the second, while in this the first joint is about one-third and third not over half as long as second joint, there are some color variations also, but they are not of much importance.

TABLE OF NORTH AMERICAN SPECIES OF PHYSOCEPHALA

1. Front black .....	2
— Front yellow, or yellow with black stripes; face yellow, sometimes the facial grooves infuscated.....	3
2. Thorax and abdomen shining black, not pollinose; face without golden yellow pollen, except on the orbits, (Mexico).....	
..... <i>carbonaria</i> Bigot	
— Thorax and abdomen more or less yellowish pollinose, opaque; face distinctly golden yellow pollinose, (Mexico).....	
..... <i>nigrifacies</i> Bigot	
3. Brown of wing fills the discal cell, reaching beyond the posterior cross-vein .....	4
— Brown of wing fills out the discal cell, but the outer part has a much lighter shade in the middle, (Utah; Calif.; Wash)...	
..... <i>buccalis</i> Van Duzee	
— Brown of wing does not fill out the discal cell, not reaching much beyond the anterior cross-vein, except narrowly along fifth vein .....	5
4. Cheeks uniformly black; pollen on the humeri indistinct, (Eastern). .....	
..... <i>tibialis</i> Say	
— Cheeks with a yellow spot, brown above and below; humeri with distinct yellow pollen, (Eastern States; Mexico).....	
..... <i>sagittaria</i> Say	
5. Cheeks uniformly black or reddish.....	6
— Cheeks with a yellow spot in the middle, or wholly yellow.....	10
6. Thorax and abdomen opaque black, (Mexico) <i>sororcula</i> Williston	

- Thorax and abdomen largely red..... 7
7. Second and third antennal joints of nearly equal length; cheeks slightly yellowish in the center, (United States; Mexico)...  
.....*affinis* Williston
- Cheeks not lighter in the middle..... 8
8. Front with a deep black, transverse, narrower divaricate stripe; dark colored species; first antennal joint less than one-third as long as second, third half as long as second, (Eastern)..  
.....*furcillata* Williston
- Front with narrower reddish stripes, or wholly yellow, lighter colored species ..... 9
9. First antennal joint less than one-third as long as second, third longer than second, (California)....*brevirostris* Van Duzee
- First antennal joint scarcely one-third as long as second, third joint hardly half as long as second, (California; New Mexico) .....*burgessi* Williston
10. Front and face wholly yellow, lower part of posterior orbits darker, (California).....*aurifacies* Van Duzee
- Cheeks with a yellow spot, having a brown or reddish band above, being dark below..... 11
11. Thorax and abdomen opaque black, segments three to five with narrow, yellow posterior bands, (Mexico) *xanthops* Williston
- Thorax and abdomen largely red..... 12
12. Posterior surface of metanotum red with several black spots.... 13
- Metanotum red on upper and lateral edges, black on posterior surface, the black forming a large, nearly square spot, which is sometimes nearly divided by a fine reddish line..... 14
13. Metanotum with a cordate mark and lateral spots; mesonotum with three black vittæ, (Mexico).....*ochreiceps* Bigot
- Metanotum with a triangular spot and a line above black; mesonotum with one black vitta, (Texas; Canada?).....  
.....*texana* Williston
14. First and third antennal joints of somewhat equal length..... 15
- Third antennal joint at least one-third longer than first..... 16
15. First antennal joint half, third more than half as long as second, (Western states; Mexico).....*affinis* Williston
- First antennal joint about one-third, third half or a little less than half, as long as second, (Utah; Calif.; Wash.).....  
.....*buccalis* Van Duzee
16. Facial grooves black, (Eastern).....*marginata* Say
- Facial grooves not infuscated..... 17
17. First antennal joint about one-third as long as second and half as long as third, (Western).....*simulans* Van Duzee
- First antennal joint about one-third as long as second and two-thirds as long as third, (Idaho).....*humeralis* Van Duzee

*Physocephala maxima* Giglio-Tos. I could not place; the female is 17 mm. long; reddish; thorax with a median black

stripe; Abdomen with second segment on the sides and third on dorsum with black spots. Front and face yellow testaceous; wings blackish, posterior margin paler. Mexico.

#### 10. *Zodion cinereiventris* Van Duzee, new species

Female: Length 3.5 mm. Face and cheeks yellowish white; width of cheeks more than half the eye height; front red, darker above, with an acute triangular space around the ocelli; a very narrow line of silvery white pollen along the orbits reaching up to the middle of the front and to lower fourth of posterior orbits; proboscis black, one and a fourth times as long as the head height; palpi very small, black with black hair; antennæ red, apical half of third joint and the arista black; third joint a little longer than second; occiput black with a little gray pollen.

Thorax and abdomen black, covered with gray pollen; mesonotum with black lines and the beginning of two more between them on the front edge, also two indistinct spots on each lateral margin; front surface of humeri black, upper surface gray with pollen. Abdomen with indistinct blackish spots where the pollen is thinner; base of fifth and sixth segments very narrowly shining black; sixth and terminal segment red with apical half of latter shining black, sixth with two spots of gray pollen; ventral plate dark red with black border, moderately large, not very conspicuous; pollen of abdomen in transverse lines; hairs of occiput, thorax and abdomen long and black.

Femora and tibiæ red, more or less of upper surface of femora and indistinct rings on the tibiæ black; tarsi reddish at base, tips brown; legs covered with gray pollen and rather long black hair; claws black; pulvilli whitish.

Wings gray, veins black, yellowish brown at root of wing; petiole of anal cell fully one-third as long as the cell, not quite reaching the wing margin; first posterior cell open.

Male: About as in the female, except that the silvery margin on the orbits is broader and reaches up nearly to the upper corner of the eye on the front and to middle of eye on posterior orbits; the proboscis one and a half times as long as the head height; second abdominal segment yellow on the sides of posterior half or more; sixth segment blackish, apical one wholly pollinose and like the abdomen with the pollen in transverse lines, ventral surface of apical segment black; hairs on thorax and abdomen shorter.

Sometimes the apical abdominal segment is wholly black, in both sexes. Described from eight females and nine males.

*Type:* Female, No. 2408, and *allotype*, male, No. 2409, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, at **Huntington Lake, Fresno Co., California**, in July, the former on the 8th and the latter on the 22nd; twelve of the paratypes were taken

at the same place and within the same dates; one was taken at Pleyto, Monterey Co., Calif., May 23, 1920, and one at Preston, Idaho, July 17, 1922, by E. P. Van Duzee; also one taken by Dr. F. E. Blaisdell, at San Diego, June 29, 1891.

### 11. *Zodion basalis* Van Duzee, new species

Male: Length 7 mm. Face and cheeks pale yellow, their pollen silvery tinged with yellow, as is also the line on the facial orbits, which extends narrowly to upper third of frontal orbits and to the middle of posterior orbits; front reddish yellow, more black at vertex; cheeks two-thirds as wide as the height of the eye, with a few slender black hairs; proboscis black, as long as the head height; upper half of occiput shining black, lower half opaque with gray pollen. Antennæ reddish, upper edge of first two joints and apical half of third blackish, the joints nearly as 2-6-3; arista as long as first antennal joint, occiput and front with long, thorax and abdomen with abundant but shorter, black hair. Thorax and abdomen black; mesonotum dulled with brownish pollen, marked with two indistinct lines of grayish pollen, which are wider posteriorly, nearly coalescing and reaching the scutellum which is more shining and has two slender marginal bristles; humeri and an irregular spot below on the pleuræ whitish pollinose; abdomen uniformly grayish pollinose, the pollen thinner on the center and base of the dorsum, leaving a minute black dot at base of each hair; genitalia black.

Fore coxæ yellowish, more brown at base, their hair black; middle and hind coxæ black; femora, tibiæ and basitarsi yellow, upper edge of femora, especially at tip, and more or less of the tips of the tibiæ blackish; last four tarsal joints black; pulvilli yellowish; claws black, red at base.

Wings yellow at base, apical two-thirds grayish; costal cell, including the subcostal vein, base of radius as far as the fork, base of fourth and fifth veins for about the same distance, and base of all other veins, saturate yellow; last section of fourth vein to preceding section as 7 to 9; petiole of anal cell and posterior cross-vein of about equal length, the former not reaching the wing margin.

*Type:* Male, No. 2410, Mus. Calif. Acad. Sci., collected by C. L. Fox, July 27, 1925, on the Moscow Mountains, Idaho, at an elevation of 3000 feet.

### 12. *Zodion bilineata* Van Duzee, new species

Male: Length 6 mm. Face and cheeks pale yellow, without hair; front reddish yellow, more brown on upper part; ocellar triangle shining, elongated downward; facial orbits silvery white, extending narrowly to upper third of front and to upper corner of eye on posterior orbit; occi-

put black wholly gray pollinose; hairs on occiput, thorax, and abdomen black and moderately long; proboscis black, as long as head height; palpi small, black with a long and short hair at tip; first two antennal joints brown, third wholly reddish, the joints about as 1.3-2-5, third wider than tip of second; arista black; cheeks more than half as wide as height of eye.

Thorax and scutellum covered with grayish pollen, dorsum with two very distinct black lines, which do not reach the front or scutellum. Abdomen reddish, first segment black, first and basal half of second segment covered with gray pollen, which contrasts with whitish pollen on the rest of the abdomen; no distinct abdominal spots; scutellum with long black hairs on the base and apical margin.

Coxæ black with gray pollen and black hair, anterior pair reddish at tip; femora and tibiæ reddish, more or less blackened; anterior femora with rather long black hair on posterior surface; tarsi largely blackish; claws red, black at tip.

Wings grayish, yellow at base and, along the front to tip of first vein; first posterior cell open; first two sections of fourth vein of equal length, third shorter and last section a little longer; petiole of anal cell about as long as the vein that closes the cell. Described from one male.

*Type:* Male, No. 2411, Mus. Calif. Acad. Sci., taken by Dr. E. C. Van Dyke, July 4, 1922, on **Wallowa Mountains, Oregon.**

### 13. *Zodion hirtipes* Van Duzee, new species

Female: Length 4.5 mm. Face dark yellow with the depressed central portion and a small spot on the cheeks below the eye black. Front reddish, more brown at vertex, with a shining triangular space around the ocelli; occiput black; sides of face, front and occiput with long black hair; antennæ wholly black, third joint nearly as long as broad, a little longer than second joint.

Thorax, abdomen, legs, feet and claws black, slightly shining; pulvilli whitish. Halteres yellow; calypters white; humeri covered with gray pollen, which continues in a faint broken stripe to above the root of the wings. Mesonotum with two narrow, indistinct lines of brownish pollen. Apical segments of abdomen with gray pollen on the sides, which is not distinctly limited; hairs on the thorax, femora and tibiæ long and black, those on posterior surface of fore femora nearly as long as the width of femora.

Wings grayish; veins black and strong; last section of fourth vein ending abruptly at half the distance from the posterior cross-vein to the wing margin; petiole at apex of anal cell half as long as the cell, reaching the wing margin.

Male: Antennæ black at base, its style pale at tip; cheeks nearly as wide as the eye height; proboscis black, reddish at base. Thorax shining

black with coarse yellowish brown pollen, which leaves indistinct black stripes, the pollen not thick enough to hide the shining black ground color, except when viewed obliquely; humeri covered with gray pollen. Abdomen shining black with thick dark yellowish gray pollen concealing the ground color on the sides and on the whole of the apical segments. Male genitalia shining black, reddish at base, with long black hair.

*Type:* Female, No. 2412, Mus. Calif. Acad. Sci., taken by E. P. Van Duzee, April 2, 1922, at **Melrose, Alameda Co., California.** *Allotype*, male, No. 2413, Mus. Calif. Acad. Sci., taken by C. L. Fox, May 16, 1924, at Klamath Lake, Oregon.

#### 14. *Zodion albifacies* Van Duzee, new species

Female: Length 3.1 mm. Face and cheeks white; facial grooves blackish at upper ends; front yellow, frontal orbits brown, the brown tapering off downward. Antennæ yellow, first joint and apical end of third brown; second and third joints of nearly equal length, third wider than second. Proboscis very slender, facial projection to which it is attached white at base, brown on more than apical half, the brown sharply defined; proboscis black, narrowly yellow at base; palpi minute, white, occiput cinereous with two narrow, slender, black lines.

Thorax and spot at tip of scutellum greenish cinereous; mesonotum with a pair of narrow median black stripes, these are a little wider posteriorly and extend back of the middle; also two lateral blackish spots on each side. Abdomen velvety black with whitish pollen, a large spot covering the side of third segment and extending on to second, a large spot on upper part of side, a median dorsal line on fourth, very narrow hind margin to the fourth, and the whole of the narrow fifth segment, covered with cinereous pollen; the sixth and genital segments yellow, tipped with black, shining, the sixth a little dulled; ventral plate short, black; hairs of the thorax short, black; abdomen nearly bare.

Coxæ mostly yellow; femora and tibiæ blackish with cinereous pollen; knees and base of tibiæ yellow; tarsi, brown; pulvilli and claws pale yellow, tips of claws black. Wings grayish; first posterior cell narrowly open; petiole of anal cell half as long as the cell and reaching the wing margin. Described from one female.

*Type:* Female, No. 2414, Mus. Calif. Acad. Sci., collected by O. C. Poling, August 15, 1924, on the **Baboquivari Mts., Arizona**, and kindly presented to the Academy by Mr. C. L. Fox.



15. *Zodion angusticornis* Van Duzee, new species

Female: Length 3.7 mm. Occiput, thorax, abdomen and coxæ shining black; face and cheeks pale yellow with silvery white pollen, depressed part of face brown; proboscis black, once and a half times the height of head; front reddish, vertex black; facial orbits, extending narrowly to upper third of front and to the middle of posterior orbits, silvery white pollinose; antennæ nearly as long as the front, yellow, brown at tip, second and third joints of about equal length, third as wide as apex of second; arista blackish.

Dorsum of thorax with thin gray pollen, when viewed obliquely two rather wide, narrowly separated, stripes are visible; humeri, a spot behind, a stripe below the pleural suture, a triangular spot on sternopleuræ, a small one above base of halteres and spots on all coxæ silvery white pollinose; hairs on thorax, abdomen and legs brownish yellow; ventral plate long and thin, black, more brown in the center.

Femora and tibiæ blackish, tinged with red, knees yellow, tarsi brown, first joint more yellow; pulvilli and basal half of claws white, apical half of claws black; halteres and calypters whitish.

Wings grayish; veins black, yellow at base of wing; first posterior cell open; last section of fourth vein straight; petiole of anal cell a little more than a third as long as the cell, nearly reaching the wing margin. Described from one female.

*Type:* Female, No. 2415, Mus. Calif. Acad. Sci., taken by E. P. Van Duzee, May 22, 1918, at Los Banos, California.

TABLE OF THE NORTH AMERICAN SPECIES OF ZODION

1. Scutellum nearly triangular, projecting; thorax and abdomen with small black spots, (Western).....	<i>willistoni</i> Banks	
— Scutellum rounded; thorax, if marked, with lines not spots.....		2
2. Thorax with whitish lines.....		3
— Thorax with brown lines or unmarked.....		5
3. Abdomen mostly pale with oblique dark bands or spots, (Western) .....	<i>obliquefasciatum</i> Macquart	
— Abdomen largely black or blackish.....		4
4. Abdomen with its pollen wholly deep golden yellow, (Texas)..	<i>albonotatum</i> Townsend	
— Abdomen with whitish pollen on the anterior segments, golden yellow on last three, (Mexico).....	<i>auricaudatum</i> Williston	
5. Small species, not much over four millimeters long.....		6
— Larger species, six millimeters long or over.....		16
6. First posterior cell closed.....		7
— First posterior cell open.....		9
7. First posterior cell closed at the wing margin, at most its petiole not as long as the anterior cross-vein, (North America)....	<i>abdominale</i> Say	

- Petiole of first posterior cell longer than the anterior cross-vein ..... 8
8. Second and third abdominal segments reddish, the others black, (Arizona) ..... *scapularis* Adams
- Abdomen wholly black; petiole of first posterior cell as long as the posterior cross-vein, (Arizona) ..... *parvum* Adams
9. Entirely black species, (California) ..... *nigrifrons* Kröber
- Front and face yellow, reddish or reddish brown ..... 10
10. Thorax black, without distinct stripes ..... 11
- Thorax black with distinct lines of gray pollen, or covered with gray pollen which leaves black lines ..... 12
11. Fore femora with black hair which is nearly as long as the thickness of the femora; thorax with indistinct lines, (California) ..... *hirtipes* Van Duzee
- Femora with the usual short hair; thorax shining black; humeri gray pollinose, (California) ..... *angusticornis* Van Duzee
12. Hairs of the fore femora as long as the width of the femora, (California) ..... *hirtipes* Van Duzee
- Hairs of fore femora short as usual ..... 13
13. Abdomen gray pollinose with very indistinct spots, (California; Idaho) ..... *cinereiventris* Van Duzee
- Abdomen black, opaque, with gray pollinose markings ..... 14
14. Ventral plate of female very small, wholly black, (Arizona) ..... *albifacies* Van Duzee
- Ventral plate of female large, reddish with a black edge ..... 15
15. Pollen of thorax and abdomen tinged with green; first four abdominal segments opaque black, with narrow hind and wide lateral margins cinereous pollinose, (Eastern) ..... *nanellum* Loew
- Pollen of thorax and abdomen brownish gray; abdomen with the black divided into two parts by a fine, median, pollenose line; hind margins, sides and bases of segments cinereous pollinose, (Western) ..... *pygmæum* Williston
16. Palpi long and clavate, (Illinois) ..... *palpale* Robertson
- Palpi very small, cylindrical ..... 17
17. First posterior cell closed ..... 18
- First posterior cell open ..... 19
18. Thorax gray with two or three, distinct, dark stripes; abdomen usually dark in color, (North America) ..... *fulvifrons* Loew
- Thorax with the stripes not so distinctly marked; abdomen of male reddish yellow or reddish brown, (Eastern) ..... *abdominale* Say
19. Thorax not distinctly striped ..... 20
- Thorax with distinct stripes ..... 22
20. Legs mostly dark; abdomen wholly blackish, (California) ..... *tristis* Bigot
- Legs mostly pale in color ..... 21

21. A wholly shining black species with coarse yellowish pollen on the thorax and abdomen, (Idaho).....*basalis* Van Duzee  
 —. Abdomen partly or wholly pale; third antennal joint fully as long as second, (California).....*obscurum* Banks
22. Proboscis beyond the palpi fully twice as long as the head height, (California; Oregon).....*reclusum* Banks  
 —. Proboscis shorter ..... 23
23. Thorax gray with two or three blackish lines or stripes besides the lateral spots..... 24  
 —. Thorax with four or five dark stripes besides the lateral spots, the intermediate ones distinct only in front..... 25
24. Second and third antennal joints of very nearly equal length, (North America).....*fulvifrons* Loew  
 —. Third antennal joint more than twice as long as the second, the joints being as 13-20-50, (Oregon).....*bilineata* Van Duzee
25. Female with the ventral plate fully twice as long as wide; the abdomen very slender and compressed; male with pale abdomen, (North America).....*perlongum* Coquillett  
 —. Ventral plate of female much shorter in proportion to its width.. 26
26. Ventral plate of female much shorter than wide, its striated area on posterior surface broad, (Virginia; Oregon; California).  
 .....*sayi* Banks  
 —. Ventral plate of female as long as wide or longer..... 27
27. Ventral plate of female one and a half times as long as wide, (Eastern) .....*intermedium* Banks  
 —. Width and length of the ventral plate of female equal, (Oregon) .....*occidentale* Banks

### 16. *Dalmannia hirsuta* Van Duzee, new species

Female: Length 7 mm. Face and cheeks wholly yellow; front blackish with black hair; antennæ brown, second joint scarcely as long as third; occiput black with white hair, a few black ones back of proboscis; palpi black with black hair.

Thorax shining black; dorsum covered with long black hair, that on the yellow humeri yellowish; scutellum yellow, black at base, covered with long black hair. Abdomen black; first segment reddish at base, second with the posterior third yellow, this yellow portion with a long projection extending forward near each side and three very small ones between; third, fourth and fifth segments with the yellow hind margin very narrow at the sides, wide in the middle and with three projections on the wide part, the middle one nearly reaching the base on fourth and fifth; sixth segment with three yellow stripes which meet at apex of segment; pile on abdomen rather long, black, except on the sides and middle portion of second segment.

Fore coxæ, femora and tibiæ yellow, upper surface of anterior and posterior femora black; tarsi black; pulvilli and claws white, tips of

claws black. Halteres yellow; wings brownish with brown veins. Described from one female.

*Type:* Female, No. 2416, Mus. Calif. Acad. Sci., taken by E. C. Van Dyke, June 11, 1925, at **Corvallis, Oregon.**

TABLE OF NORTH AMERICAN SPECIES OF DALMANNIA

1. Scutellum wholly black; humeri black. (California).....	
.....	<i>vitiosa</i> Coquillett
— Humeri yellow; scutellum partly yellow.....	2
2. First abdominal segment black, yellow at base and on apical margin; second to fourth yellow with black spots, which are sometimes slightly connected, (Oregon).....	<i>pacifica</i> Banks
— Abdomen black; segments two to four with yellow hind margins, which are emarginate or have extensions of the yellow in front .....	3
3. Pile of thorax whitish.....	4
— Pile of the thorax black, at least in the middle.....	5
4. Yellow of abdominal bands not produced forward on the sides, but that of third and fourth segments extending forward in the middle, (Eastern).....	<i>nigriceps</i> Loew
— Yellow of abdominal bands extending forward on both sides and middle of segments two to four. (New Mexico; California). .....	<i>picta</i> Williston
5. Pile of the thorax short, black in the center, yellowish on the front of the dorsum and on the scutellum; that of the abdomen largely black, rather short, (California).....	
.....	<i>blaisdelli</i> Cresson
— Pile of the thorax and scutellum long and black, except on the humeri; that of the abdomen rather long, black, except on the sides and center of second segment, (Oregon).....	
.....	<i>hirsuta</i> Van Duzee

17. *Oncomyia infuscipes* Van Duzee, new species

Female: Length 7.7 mm. Black with the following parts yellow, front, except the vertex and two lines running downward from the vertex and meeting on the middle of the front, face, cheeks, lower edge of first antennal joint, inner surface and lower part of second and third antennal joints, most of the fore coxæ, lower half of fore and middle femora, except near the tip, basal two-thirds of hind femora, about basal third of all tibiæ, most of basal joint of all tarsi, pulvilli, claws, except at tip and the halteres; front with rather long black hair down to the antennæ; cheeks with conspicuous, but sparse black hair all over; joints of antennæ as 15-32-25; apical section of proboscis distinctly longer than first; cheeks and anterior surface of fore coxæ covered with silvery pollen; dorsum of thorax quite thickly covered with brownish pollen, that on the humeri paler, anterior surface of thorax shining; lower half of occiput

opaque with white pollen; abdomen with quite thick whitish pollen; genital segment shining black; hairs of thorax and abdomen wholly black, but those on apical part of abdomen more brown in certain lights; ventral plate of female broad, semicircular, shining black. Wings tinged with brown; costal cell and veins at base of wings yellow.

Male: Antennal joints about the same as in the female; second section of proboscis a little longer and a little yellow at tip; abdomen thickly covered with dark grayish pollen, especially towards the posterior end and including the genital segment; vertex black, below that the front is brown with a large yellow spot in the center above the antennæ, which does not reach the orbits.

*Type:* Female, taken by the author at **Kearney, Ontario**, August 1, 1911, in his collection. *Allotype*, male, No. 2417, Mus. Calif. Acad. Sci., taken by author at Irving, Erie Co., N. Y. One paratype taken with the allotype.

#### 18. *Oncomyia brevirostris* Van Duzee, new species

Female: Length 5 mm. Black, the following parts yellow: lower half of front, extending a little up the orbits, face, cheeks, antennæ, except the upper edge, most of fore coxæ, base of fore and middle femora, basal half of hind femora, narrow base of all tibiæ, most of basal joint of all tarsi, pulvilli, base of claws, and the halteres; apical part of proboscis a little yellowish; facial grooves blackened on upper half. Cheeks with two or three hairs besides those near the edge; last section of proboscis about three-fourths as long as first; joints of antennæ as 13-24-16; anterior surface of fore coxæ and fore and middle tibiæ covered with silvery pollen; upper surface of thorax dulled with a little grayish pollen; humeri, lower half of occiput and apical half of second abdominal segment on the sides covered with white pollen; genital segment of abdomen shining black; ventral plate semicircular, shining black; wings rather dark grayish; costal cell and base of wings yellow.

*Type:* Female, No. 2418, Mus. Calif. Acad. Sci., taken by C. L. Fox, July 11, 1925, at **Pullman, Washington**. One paratype taken by the author at Mt. St. Helena, Calif., May 12, 1926.

#### 19. *Oncomyia propinqua* Adams

There seems to be no reason to separate *propinqua* Adams from *loraria* Loew, the description fitting the male of that species very well. The males are very difficult to separate, but for the present we will be quite safe in considering it that species.

## 20. *Oncomyia æqualis* Van Duzee, new species

Length 5.5-6 mm. Black, the following parts yellow: less than lower half of front, extending somewhat up the orbits, face, cheeks, inner surface and lower edge of antennæ, most of fore coxæ, narrow base of fore and middle femora, basal half of hind femora, base of all tibiæ, most of basal joint of all tarsi, pulvilli, claws, except their tips and the halteres. Cheeks with a very few hairs on their surface, besides those on the edge; proboscis with the second section only a little shorter than the first; joints of antennæ as 13-25-22; thorax dulled with a little gray pollen; lower half of occiput, humeri and a considerable part of second abdominal segment covered with thick white pollen, there is a little thin white pollen on the remainder of the abdomen, which is visible in certain lights; genital segment shining black; ventral plate semicircular, shining black; wings grayish, a little yellow at root.

*Type:* Female, No. 2419, Mus. Calif. Acad. Sci., taken by the author, May 11, 1926, at **Lower Lake, Lake Co., California**. One paratype taken by the author May 15, 1915, in Muir Woods, Marin Co., California, is in the author's collection.

## 21. *Oncomyia terminalis* Van Duzee, new species

Female: Length 4-4.2 mm. Black with base of femora and tibiæ, halteres, base of wings, more or less of the antennæ and sometimes lower half of the front, yellow; sometimes the front is wholly brown; face and cheeks yellowish white; third antennal joint a little shorter than second; hairs on the lower edge of the cheeks black; proboscis black, more or less reddish at tip, its segments of about equal length; palpi black, moderately long, a little clavate; front wholly covered with long black hair. Thorax and abdomen shining black with black hair. Ventral plate narrow, short, about as long as wide, shining black. Fore coxæ largely yellow with black hair and several long, curved, bristly hairs at tip. Pulvilli and base of claws yellowish white, tips of claws black. Calypters and their cilia pale yellow. Wings grayish; veins black, yellow at root of wing.

*Type:* Female, No. 2420, Mus. Calif. Acad. Sci., taken by E. C. Van Dyke, June 14, 1920, at **Hood River, Oregon**. Three paratypes, all females, were taken in Washington, by C. L. Fox, in 1925, in the following places: Pullman, July 11; Colfax, July 10, and Metaline Falls, August 1.

## 22. *Oncomyia angusticornis* Van Duzee, new species

Male and female: Length 3.5-4 mm. Shining black; front, face, cheeks, narrow base of tibiæ and knobs of halteres yellow. Front nearly bare; cheeks with silvery white pollen, which extends a little way up on the posterior orbits and very narrowly up the frontal orbits to the vertex; lower half of occiput opaque with white pollen, upper half shining. Antennæ blackish, or more or less reddish; second joint longer than third, third slightly narrower than usual and almost reaching the oral margin; style very short, placed near the middle of third joint; hairs on the oral margin of the cheeks short and delicate; proboscis and the small palpi black, the former with its segments of nearly equal length. Most of the hairs on thorax, abdomen and legs pale, yellowish or grayish, but sometimes they appear blackish, or even quite black, those on the lower surface of femora long; pulvilli and base of claws yellow, tips of claws black. Pollen on thorax and abdomen in female very thin, more conspicuous on the abdomen of the male but never very abundant. Femora a little thickened. Ventral plate of female quite long and moderately narrow, shining red, shading into a black border. Wings grayish, yellow at base; first vein wholly yellow, veins on apical part of wing black. Calypters and their cilia white. Described from seventeen females and seven males.

*Type:* Female, No. 2421, and *allotype*, male, No. 2422, Mus. Calif. Acad. Sci., taken by C. L. Fox, July 27, 1925, on **Moscow Mountain, Idaho**, at 3000 feet elevation.

The paratypes were taken at the following places: four females, Atascadero, Monterey Co., Calif., April 26, 1919, E. P. Van Duzee; one female, Paradise Valley, Kings River, Fresno Co., Calif., July 19, 1910, E. C. Van Dyke, at 7000 feet; one male and four females, Huntington Lake, Fresno Co., Calif., July 9-28, 1919, E. P. Van Duzee, at 7000 feet; one male, Lewiston, Idaho, July 21, 1925, C. L. Fox; one male and two females, same data as type; one female, San Pedro, Calif., October 25, 1909, E. C. Van Dyke; one male, Shasta Co., Calif., July 11, 1921, J. A. Kusche; one female, Colton, Calif., May 26, 1917, E. P. Van Duzee; one female, Corona, Calif., September, 1920, G. R. Wilson; one male, Forks, Clallam Co., Wash., July 1, 1920, Helen Van Duzee; one female, Warner Mts., Lake Co., Oregon, June 19, 1922, E. C. Van Dyke; and one female, Cochise Co., Arizona, June 26, 1916, Virgil Owen.

23. *Oncomyia nigra* Van Duzee, new species

Male and female: Length 6 mm. Shining black, except the following parts which are yellow: lower half of front and narrow orbits, face, cheeks, lower half of antennæ, halteres, calypters, wide base of hind femora, narrow base of four anterior femora, base of all tibiæ and tarsi and tarsal claws, pulvilli and base of wings. The shining space around ocelli extends downward in an acute point. Front, occiput, thorax and abdomen with quite long black hair; cheeks with a few black hairs on their surface and a row of black hairs on their oral margin which are about as long as the first antennal joint; cheeks with silvery white pollen, which extends narrowly up to the middle of the eye on both frontal and posterior orbits. First antennal joint less than half as long as third, which is three-fourths as long as second joint. Palpi small, black; proboscis with apical segment in female about as long as the first, in the male a little shorter. Femora much thickened. Ventral plate of female narrow and rather long, shining black. Apical half or more of wing faintly tinged with brown, contrasting with the yellow base.

*Type:* Female, No. 2423, and *allotype*, male, No. 2424, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, June 11, 1925, at **Corvallis, Oregon**. One paratype, same data.

## TABLE OF NORTH AMERICAN SPECIES OF ONCOMYIA

1. Ventral plate of female narrow, its sides nearly parallel for half their length .....	2
— Ventral plate wide, rounded from the base.....	5
2. Ventral plate of female long, dark reddish or brownish with a distinct black border; more or less of the hair on apical part of abdomen distinctly pale in color, (Western).....	
..... <i>angusticornis</i> Van Duzee	
— Ventral plate wholly shining black, if tinged with red then uniform in color, without a distinct black border.....	3
3. Ventral plate of female long; hairs on the edge of the cheeks short, (Oregon).....	
..... <i>nigra</i> Van Duzee	
— Ventral plate of female short, as long as wide.....	4
4. Ventral plate tinged with red; hairs on abdomen, especially on apical segments and sides largely pale, often tinged with yellow, (Eastern).....	
..... <i>loraria</i> Loew	
— Ventral plate wholly deep shining black; hairs on abdomen almost wholly black, (Oregon; Washington).....	
..... <i>terminalis</i> Van Duzee	
5. Femora and tibiæ mostly reddish, sometimes brownish above or at tip .....	6
— Femora and tibiæ nearly half or more than half black.....	7
6. Third antennal joint about one-fifth shorter than second, the joints being as 10-26-20; hair on apical part of abdomen usually largely pale, (Eastern).....	
..... <i>abbreviata</i> Loew	



- Third antennal joint more than one-fourth shorter than second; hair of abdomen wholly or almost wholly black, (Western).  
.....*modesta* Williston
7. Ventral plate of female very short, wide, shining black; hairs on abdomen usually largely pale. (Western)...*baroni* Williston
- Ventral plate of female almost a true semicircle..... 8
8. Abdomen of female mostly covered with pollen; joints of antennæ as 15-32-25; second section of proboscis longer than first, (Ontario) .....*infuscipes* Van Duzee
- Abdomen almost without pollen, except on second segment; second section of proboscis not longer than first..... 9
9. Third antennal joint only slightly shorter than second, the antennal joints being as 13-25-22; second section of proboscis a little shorter than first, (California)...*aqualis* Van Duzee
- Third antennal joint one-fourth shorter than second, the joints being 13-24-16; second section of proboscis about three-fourths as long as first, (California)...*brevirostris* Van Duzee

## TABLE OF THE NORTH AMERICAN SPECIES OF MYOPA

1. Wings marked with brown or the cross-veins clouded..... 2
- Wings unspotted, but sometimes uniformly infuscated..... 8
2. First posterior cell closed before the wing margin..... 3
- First posterior cell open..... 5
3. Wings strongly infuscated, especially across the middle, base light yellow; hairs of abdomen white, (Eastern).....  
.....*vesiculosa* Say
- Cross-veins clouded; a conspicuous spot in first posterior cell, (Washington; California).....*melanderi* Banks
- Cross-veins unclouded; no spot in first posterior cell; stigma brown ..... 4
4. Wings tinged with reddish, (Nevada).....*castanea* Bigot
- Wings tinged with yellow; first marginal cell brown, second marginal cell scarcely tinged with yellow, (Colorado).....  
.....*flavopilosa* Kröber
5. Wings with a brown spot in first and second posterior cells, (Arizona; California).....*willistoni* Banks
- Wings otherwise marked with brown; no spots in the posterior cells ..... 6
6. Cross-veins clouded with brown, (Nova Scotia).....  
.....*vicaria* Walker, *pilosa* Williston
- Wings broadly yellow at base, brown apically, with a more or less broken, hyaline cross-band or streaks..... 7
7. A hyaline streak in first posterior cell and also in discal cell; nearly the whole of second posterior cell hyaline; a brown cloud back of fifth vein, (Mexico).....*feneestrata* Coquillett

- The hyaline cross-band reduced to a subtriangular spot next to fourth vein; wings hyaline back of fifth vein, (Mexico) . . . . . *pulchra* Coquillett
8. Thorax and abdomen with white or yellow hair . . . . . 9
- Hair of thorax and abdomen black . . . . . 12
9. Hair of thorax and abdomen white . . . . . 10
- Hair of thorax and abdomen yellowish . . . . . 11
10. Wings with a dark shade across the middle (United States), (perhaps *conjuncta* Thom.) . . . . . *vesiculosa* Say
- Wings without a dark shade; abdomen wholly reddish, (Nebraska) . . . . . *vesiculosa varians* Banks
11. Abdomen red with two black lines on third segment, its hair yellow, (North America) . . . . . *bistria* Walker
- Abdomen red without black marks, except narrow cross-bands; hair bright yellowish brown, (Colorado) . . . . . *flavopilosa* Kröber
12. Antennæ very short, second and third joints of nearly equal length, each about as long as wide, (California; Colorado), (perhaps this should go in Sicus) . . . . . *curticornis* Kröber
- Antennæ as long as the head, (Eastern) . . . . . *longicornis* Say
- Antennæ of moderate length, second and third joints distinctly longer than wide . . . . . 13
13. Knobs of halteres brown, (no locality given, probably from Kansas) . . . . . *tectura* Adams
- Knobs of halteres yellow or whitish . . . . . 14
14. Abdomen mostly blackish, at least on the dorsum . . . . . 15
- Abdomen wholly reddish, or nearly so . . . . . 17
15. Abdomen reddish on the sides and at tip . . . . . 16
- Abdomen almost wholly black, its hair rather short, (Eastern) . . . . . *virginica* Banks
16. Hair on abdomen long, (Washington) . . . . . *longipilus* Banks
- Hair on the abdomen short, (Arizona) . . . . . *plebeia* Williston
17. Abdomen with very short and scattering hair, wholly shining, (Western) . . . . . *seminuda* Banks
- Abdomen with the hair as long as usual; always more or less pollinose . . . . . 18
18. Proboscis very short; second and third segments taken together not much longer than fore femora, (Western) . . . . . *rubida* Bigot
- Proboscis very long, its segments each as long as fore femora . . . . . 19
19. Abdomen red with an oval white pollinose spot on each side at the posterior margin of second, third and fourth segments; wings moderately infuscated; first posterior cell closed and petiolate, (Eastern) . . . . . *clausa* Loew
- Abdomen more or less black on the dorsum; humeri black; first posterior cell open; wings wholly hyaline with the base yellow, (British Columbia; Maine; Washington; Nevada) . . . . . *clausa aperta* Roder

## NORTH AMERICAN SPECIES OF SICUS

- . Mouth parts black; face and cheeks pale yellow; antennæ reddish yellow; abdomen black, second and third segments in male largely yellow in ground color; legs black, knees yellow; wings hyaline, tinged with gray at base and in costal cell; first posterior cell closed and petiolate; halteres yellow; length 4 mm., (Mexico).....*brevirostris* Coquillett
- . Face and cheeks pale yellow; palpi yellow; antennæ black with second joint reddish yellow; abdomen shining black; legs and feet almost wholly reddish yellow; wings grayish, veins black, narrowly clouded with brown; first posterior cell open; length 5.7 mm.; halteres and calypters yellow, (Alaska)....  
.....*ciliatus* Van Duzee

24. *Sicus ciliatus* Van Duzee, new species

Male: Length 5.7 mm. Head black; lower third of front yellow; face, cheeks and palpi pale yellow; cheeks on oral margin with long, converging, whitish hair, these hairs as long as the antennæ; occiput opaque with gray pollen, its hair short and brownish on upper part, very long and white below, sides with a few black hairs. Antennæ very short, with first and third joints black, second reddish yellow, third a little longer than wide, as long as two basal joints taken together; style about as long as width of third antennal joint, inserted at its base; palpi longer than the antennæ, elongate oval with a short petiole, fringed with long white hair; proboscis shining black, as long as the height of the head, its second segment apparently only about as long as wide (it may be broken).

Thorax, abdomen and all coxæ shining black; three wide stripes on mesonotum, the lateral ones divergent, and most of the pleuræ opaque with coarse, gray pollen which is tinged with yellow in places; bristles of thorax yellow except one black one in front of each wing; four bristles on each side of front, one each side of scutellum near the middle, two on upper posterior edge of pteropleura, yellow; these last two bristles are continued downward by a row of stiff hairs; hairs of the abdomen, coxæ, sternopleuræ, femora and tibiæ yellowish white and long; most of the hairs on the tarsi and the bristles of the legs black. Abdomen with only a little gray pollen on the dorsum. A pair of small hypopygial appendages and the ventral plate black, a long, two-jointed filament extends downward from behind the ventral plate. Femora considerably thickened, yellowish red. Halteres and calypters yellow, the latter with white cilia.

Wings grayish, costa brown; veins black, a little clouded with brown which tinges the cells more or less; anterior cross-vein near apical third of discal cell; second basal and anal cells of nearly equal length; the vein closing the second basal cell imperfect; first basal cell extending considerably beyond the tip of first vein; last section of fifth vein short; vein closing anal cell perpendicular to sixth vein, which has its last section considerably longer than the first.

*Type:* Male, No. 2425, Mus. Calif. Acad. Sci., taken by G. A. Christofferson, in July or August, 1925, on **St. Paul Island, Alaska.**

LIST OF THE NORTH AMERICAN SPECIES OF CONOPIDÆ

Genus CONOPS Linnæus

- anthreas** Williston, *Biologia*, Diptera, iii, 80, 1892.  
**argentifacies** Van Duzee, new species.  
**arizonicus** Banks, *Ann. Ent. Soc. Am.*, ix, 191, 1916.  
**auratus** Townsend, *Trans. Am. Ent. Soc.*, xxvii, 161, 1901.  
**brachyrhynchus** Macquart, *Diptera Exotica*, ii, 3, 15, 1843.  
**bulbirostris** Loew, *Neue Beitr.*, i, 30, 1853.  
**discalis** Williston, *Biologia*, Diptera, iii, 80, 1892.  
**excisus** Wiedemann, *Auss. Zweifl. Ins.*, ii, 334, 1830.=*sugens*  
 Wied. (Kröber.)  
**fenestratus** Kröber, *Archiv. Naturg.*, 81, A, 5, p. 134, 1915.  
**flaviceps** Macquart, *Diptera Exotica*, ii, 3, 15, 1843.  
**formosus** Kröber, *Archiv. Naturg.*, 81, A, 5, p. 125, 1915.  
**foxi** Van Duzee, new species.  
**fraterculus** Van Duzee, new species.  
**fronto** Williston, *Trans. Conn. Acad.*, iv, 341, 1883.  
**fulvipennis** Macquart, *Diptera Exotica*, ii, 3, 13, 1843.  
**gracilis** Williston, *Trans. Conn. Acad.*, vi, 377, 1885.  
**magnus** Williston, *Kans. Univ. Quart.*, i, 43, 1892.  
**mexicanus** Kröber, *Archiv. Naturg.*, 81, A, 5, p. 128, 1915.  
**nigrimanus** Bigot, *Ann. Soc. Ent. Fr.*, 1887, 38.  
**obscuripennis** Williston, *Trans. Conn. Acad.*, iv, 328, 1883.=  
*brachyrhynchus* Macq. (Aldrich Cat.)  
**ocellatus** Giglio-Tos, *Boll. R. Univ. Torino*, vii, 132, 1892.=  
*parvus* Will. (Aldrich Cat.)  
**pallifrons** Coquillett, *Proc. Ent. Soc. Wash.*, vi, 92, 1904.  
 (Kröber, *Archiv. Naturg.*, 81, A, 5, p. 141, 1915.)  
**parvus** Williston, *Kans. Univ. Quart.*, i, 46, 1892.  
**pictifrons** Kröber, *Archiv. Naturg.*, 81, A, 5, p. 135, 1915.  
**pictus** Fabricius, *Ent. Syst.*, iv, 391, 1794.  
**pulchellus** Kröber, *Archiv. Naturg.*, 81, A, 5, p. 134, 1915.  
**quadrimaculatus** Ashmead, *Orange Insects*, p. 69, 1880.  
**rubicundulus** Van Duzee, new species.

- semifuscus** Banks, Ann. Ent. Soc. Am., ix, 192, 1916.=var. of  
*brachyrhynchus* Macq.  
**sequax** Williston, Biologia, Diptera, iii, 80, 1890.  
**soror** Kröber, Archiv. Naturg., 81, A, 5, p. 131, 1915.  
**striatifrons** Kröber, Archiv. Naturg., 81, A, 5, p. 132, 1915.  
**sugens** Wiedemann, Auss. Zweifl. Ins., ii, 236, 1830.  
**sylvosus** Williston, Trans. Conn. Acad., iv, 329, 1883.  
**xanthopareus** Williston, Trans. Conn. Acad., iv, 332, 1883.

#### Genus PHYSOCEPHALA Schiner

- affinis** Williston, Trans. Conn. Acad., iv, 339, 1883.  
**aurifacies** Van Duzee, new species.  
**brevirostris** Van Duzee, new species.  
**burgessi** Williston, Trans. Conn. Acad., iv, 336, 1883.  
**buccalis** Van Duzee, new species.  
**carbonaria** Bigot, Ann. Soc. Ent. Fr., 1887, 42.  
**castanoptera** Loew, Neue Beitr., i, 33, 1853.  
**furcillata** Williston, Trans. Conn. Acad., iv, 336, 1883.  
**humeralis** Van Duzee, new species.  
**marginata** Say, Jl. Acad. Nat. Sci., Phila., iii, 82, 1823; Compl.  
Writ., ii, 73.  
**maxima** Giglio-Tos, Boll. R. Univ. Torino, vii, No. 132, 1892.  
(Kröber, Archiv. Naturg., 81, A, 5, p. 108, 1915.)  
**nigrifacies** Bigot, Ann. Soc. Ent. Fr., 1887, 40.  
**ochreiceps** Bigot, Ann. Soc. Ent. Fr., 1887, 39.  
**sagittaria** Say, Jl. Acad. Nat. Sci. Phila., iii, 83, 1823; Compl.  
Writ., ii, 73.  
**simulans** Van Duzee, new variety of *humeralis* Van Duzee.  
**sororcula** Williston, Biologia, Diptera, iii, 83, 1892.  
**texana** Williston, Trans. Conn. Acad., iv, 338, 1883.  
**tibialis** Say, Jl. Acad. Nat. Sci. Phila., iv, 338, 1883; Compl.  
Writ., ii, 363.  
**xanthopus** Williston, Biologia, Diptera, iii, 83, 1892.

#### Genus ZODION Latreille

- abdominale** Say, Jl. Acad. Nat. Sci. Phila., iii, 84, 1823; Compl.  
Writ., ii, 74.  
**abitus** Adams, Kans. Univ. Sci. Bul., ii, 33, 1903.=*fulvifrons*  
Say (Banks).

- albifacies** Van Duzee, new species.  
**albonotatum** Townsend, Jl. N. Y. Ent. Soc., v, 175, 1897.  
**angusticornis** Van Duzee, new species.  
**auricaudatum** Williston, Biologia, Diptera, iii, 85, 1892.  
**basalis** Van Duzee, new species.  
**bicolor** Adams, Kans. Univ. Sci. Bul., ii, 35, 1903.  
**bilineata** Van Duzee, new species.  
**cinereiventris** Van Duzee, new species.  
**flavipenne** Bigot, Ann. Soc. Ent. Fr., 1887, 204.=*fulvifrons* Say (Aldrich Cat.)  
**fulvifrons** Say, Jl. Acad. Nat. Sci. Phila., iii, 83, 1823; Compl. Writ., ii, 74.  
**hirtipes** Van Duzee, new species.  
**intermedium** Banks, Ann. Ent. Soc. Am., ix, 193, 1916.  
**leucostoma** Williston, Trans. Conn. Acad., vi, 380, 1885.=  
*obliquefasciatum* Macq. (Aldrich Cat.)  
**nanellum** Loew, Cent. viii, 75, 1869.  
**nigrifrons** Kröber, Archiv. Naturg., 81, A, 4, p. 97, 1915.  
**obscurum** Banks, Ann. Ent. Soc. Am., ix, 194, 1916.  
**occidentis** Walker, List, iii, 676, 1849.=*nanellum* Loew (Aldrich Cat.)  
**occidentale** Banks, Ann. Ent. Soc. Am., ix, 194, 1916.  
**obliquefasciatum** Macquart, Diptera Exotica, Suppl., i, 141, 1845.  
**palpale** Robertson, Can. Ent., xxxiii, 284, 1901.  
**parvum** Adams, Kans. Univ. Sci. Bul., ii, 34, 1903.  
**perlongum** Coquillett, Can. Ent., xxxiv, 199, 1902.  
**pictulum** Williston, Trans. Conn. Acad., vi, 379, 1885.  
**pygmaeum** Williston, Trans. Conn. Acad., vi, 381, 1885.  
**reclusum** Banks, Ann. Ent. Soc. Am., ix, 195, 1916.  
**rufifrons** Macquart,=*fulvifrons* Say (Banks).  
**sayi** Banks, Ann. Ent. Soc. Am., ix, 195, 1916.  
**scapulare** Adams, Kans. Univ. Sci. Bul., ii, 34, 1903.  
**splendens** Jaenicke, Neue Exot. Diptera, 405, 1867.=*obliquefasciatum* Macq. (Aldrich Cat.)  
**tristis** Bigot, Ann. Soc. Ent. Fr., 1887, 203.  
**zebrinum** Bigot, Ann. Soc. Ent. Fr., 1887, 204.

Genus *STYLOGASTER* Macquart

- biannulata* Say, Jl. Acad. Nat. Sci. Phila., iii, 81, 1823; Compl. Writ., ii, 72.=*stylata* Fabr. (Wiedemann.)  
*etiops* Townsend, Ann. Mag. Nat. Hist., Ser. 6, xix, 26, 1897.  
*minuta* Townsend, Ann. Mag. Nat. Hist., Ser. 6, xix, 27, 1897.  
*neglecta* Williston, Trans. Conn. Acad., vi, 91, 1883.  
*stylata* Fabricius, Syst. Antil., 177, 1805.  
*stylosa* Townsend, Ann. Mag. Nat. Hist., Ser. 6, xix, 24, 1897.

Genus *DALMANNIA* Robineau-Desvoidy

- blaisdelli* Cresson, Proc. Acad. Nat. Sci. Phila., lxxi, 190, 1919.  
*hirsuta* Van Duzee, new species.  
*nigriceps* Loew, Cent. vii, 71, 1866.  
*pacifica* Banks, Ann. Ent. Soc. Am., ix, 199, 1916.  
*picta* Williston, Trans. Conn. Acad., vi, 94, 1883.  
*vitiosa* Coquillett, Ent. News, iii, 150, 1892.

Genus *ONCOMYIA* Robineau-Desvoidy

- abbreviata* Loew, Cent. vii, 73, 1866.  
*æqualis* Van Duzee, new species.  
*angusticornis* Van Duzee, new species.  
*baroni* Williston, Trans. Conn. Acad., vi, 97, 1883.  
*brevirostris* Van Duzee, new species.  
*infuscipes* Van Duzee, new species.  
*loraria* Loew, Cent. vii, 74, 1866.  
*modesta* Williston, Trans. Conn. Acad., vi, 96, 1883.  
*melanopoda* Williston, Trans. Conn. Acad., vi, 91, 1883.=var. of *modesta* Will. (Aldrich Cat.)  
*nigra* Van Duzee, new species.  
*propinqua* Adams, Kans. Univ. Sci. Bull., ii, 32, 1903.=*loraria* Loew (Van Duzee).  
*terminalis* Van Duzee, new species.

Genus *MYOPA* Fabricius

- aperta* Röder, Wien. Ent. Zeit., viii, 5, 1889.=var. of *clausa* Loew.  
*bistria* Walker, List, iii, 679, 1849.

- castaneus* Bigot, Ann. Soc. Ent. Fr., 1887, 207.  
*clausa* Loew, Cent. vii, 72, 1866.  
*conjuncta* Thomson, Eugenae Resa, Dipt., 515, 1868.=*vesiculosa* Say?  
*curticornis* Kröber, Archiv. Naturg., 83, p. 32, 1919.  
*fenestrata* Coquillett, Can. Ent., xxxiv, 197, 1902.  
*flavopilosa* Kröber, Archiv. Naturg., 83, p. 30, 1919.  
*longicornis* Say, Jl. Acad. Nat. Sci. Phila., iii, 1823; Compl. Writ., ii, 72.  
*longipilus* Banks, Ann. Ent. Soc. Am., ix, 197, 1916.  
*maculifrons* Bigot, Ann. Soc. Ent. Fr., 1887, 206.  
*melanderi* Banks, Ann. Ent. Soc. Am., ix, 197, 1916.  
*pictipennis* Williston, Trans. Conn. Acad., vi, 382, 1885.=*willistoni* Banks.  
*pilosa* Williston, Trans. Conn. Acad., vi, 383, 1885.=*vicaria* Walk.? (Banks).  
*plebeia* Williston, Trans. Conn. Acad., vi, 384, 1885.  
*pulchra* Coquillett, Can. Ent., xxxiv, 198, 1902.  
*rubida* Bigot, Ann. Soc. Ent. Fr., 1887, 206.  
*seminuda* Banks, Ann. Ent. Soc. Am., ix, 198, 1916.  
*tectura* Adams, Kans. Univ. Sci. Bul., ii, 35, 1903.  
*varians* Banks, Ann. Ent. Soc. Am., ix, 196, 1916.=var. of *vesiculosa* Say.  
*vesiculosa* Say, Jl. Acad. Nat. Sci. Phila., iii, 80, 1823; Compl. Writ., ii, 72.  
*vicaria* Walker, List, iii, 679, 1849.  
*virginica* Banks, Ann. Ent. Soc. Am., ix, 198, 1916.  
*willistoni* Banks, Ann. Ent. Soc. Am., ix, 197, 1916.=n. n. for *pictipennis* Williston.

#### Genus SICUS Scopoli

- brevirostris* Coquillett, Can. Ent., xxxiv, 198, 1902.  
*ciliatus* Van Duzee, new species.